



## FROM THE DESK OF THE DDSN MEDICAL CONSULTANT

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## SKIN CARE – PRESSURE WOUNDS

We care for many people who are likely to have skin breakdown and pressure wounds. Our day-by-day care makes a difference that can prevent these conditions or help heal them quickly if they occur.

The skin that covers our body is the body's largest organ. It protects the internal organs from water, temperature changes, toxic substances, and infections. Though it is tough and flexible and can stretch, it can be injured and is repaired by healing processes. We can easily see cuts or burns, but we also need to be aware of the damage that excessive pressure, force, or friction can cause. These injuries have been called a pressure ulcer, bed sore, or decubitus ulcer but a better name is "pressure wound" as the pressure does cause a wound of the skin.

The skin is damaged when the pressure on the skin squeezes the small blood vessels that supply oxygen and food to the skin tissue. If the pressure lasts too long and the skin is starved of blood for too long, then the tissue dies and an ulcer forms. Skin can be injured when the body is moved across rough material causing friction which can tear the small blood vessels and also damage the skin's surface. Local areas of intense pressure can cause blood flow reduction and very small area of skin damage. People who cannot move easily or who have skin that does not feel pain or pressure well (for example: people with a spinal cord injury, severe cerebral palsy, or even advanced aging) are more likely to have these skin problems. We need to take care of these people so that skin damage does not happen, or if it does, we can help it heal quickly.

## What is happening to cause a pressure sore?

Skin problems from pressure usually start where there are bony parts that stick out and they are not covered by much padding of muscle or fat. You can see this in places like over the hips, the base of the spine (called the sacral area) and over the ankles. In these areas there is bone against skin inside the body and if this part of the body is against a hard surface outside then the pressure from inside and outside pinches the blood vessels and closes off blood flow. Sometimes this means that there is increased fluid collects in the area. The swelling closes off the blood vessels even more and the results is that the skin breaks and a pressure wound forms.

## What reduces or increases the chance of skin breakdown?

A pressure wound develops easily if we cannot reduce the time that the pressure is present and reducing blood flow. We also need to reduce the amount of dragging friction that happens to the skin so that it does not damage the blood vessels and lead to an ulcer. If a person cannot move and also cannot feel the skin well (which happens for people with spinal cord injuries) then they are more likely to develop ulcers. They do not feel numbness so do not move to reduce the numbness and help blood flow. If a person is losing weight and has less tissue – muscle and fat around seating areas or other bony places, then they are more likely to have skin breakdowns.

We need to watch and encourage good nutrition and weight control with exercise and good diet. If people gain too much weight then pressure areas are more serious too. Smoking is a habit that increases the chance of pressure ulcers as it causes blood vessels to narrow and reduce blood flow. Diabetes also affects blood vessel to narrow both large and small vessels so people with diabetes need to be very careful in the care of the skin of their toes and feet. All skin loses some collagen as we age so older people need to watch more carefully too. Excessive moisture of skin makes it very likely to break and form pressure wounds; so we need to watch areas of pressure where there is excess sweating and areas where skin has urine or bowel contents on the surface. If it is kept clean, it helps reduce ulceration.

## Pressure Wound Groups

To talk about pressure wounds we use stage descriptions of the damage that has occurred

<i>Stage I</i>	Just redness/may be swelling/may be hard or hot. Problem is reversible once pressure is relieved, skin returns to normal.
<i>Stage II</i>	Area is blistered or scabbed with skin open; may be discharge. Pressure relief needed but ulcer will remain as tissue has begun to die.
<i>Stage III</i>	Area has hole; may have discharge; dead tissue down to subcutaneous layer of skin.
<i>Stage IV</i>	Tissue death has extended to muscle and bone; usually has discharge (maybe pus); sometimes area is warm and has infection; may progress to serious sepsis, which can be life threatening.

Our aim will always be to prevent any skin breakdown or pressure wound and to heal them as quickly as possible if one is present.

## How do we manage pressure wounds?

### *Stage I* - (pressure effects present)

- ♦ Remove pressure and its cause;
- ♦ Clean with warm water and dry (pat do not rub);
- ♦ Keep pressure off until color is normal;
- ♦ Check equipment, shoes, chairs, and bed for pressure areas;
- ♦ Maintain nutritious diet, fluid intake and exercise;
- ♦ If not better in few days, ask for help.

### *Stage II* – (needs action, tissue has begun to die)

- ♦ Remove pressure;
- ♦ Check environment for pressure areas;
- ♦ Keep wound clean and dry;
- ♦ Follow treatment suggestions of health care provider (may clean with saline and apply dressing).

### *State III* – (damaged tissue present)

- ♦ Remove pressure;
- ♦ Check environment for pressure areas (may use special mattresses or cushions);
- ♦ Keep wound dry and clean;
- ♦ Specialized wound care may need surgical removal of dead tissue (debridement) with special packing and antibiotics.

### *Stage IV* – (damage includes muscle and even bones)

- ♦ Remove pressure – weight shifts, special mattresses, prolonged bed rest, etc.
- ♦ Keep dry and clean, or special treatments;
- ♦ May need antibiotic treatment; special debridement (cutting away dead and infected tissue); specialized dressings; new techniques include vacuum closure and electrical stimulation;
- ♦ Plastic surgery may consult for grafts.

## What about prevention?

- ♦ Maintain all consumers with good diet, exercise; skin hygiene;
- ♦ Maintain ideal body weight where possible;
- ♦ Check skin condition regularly. Avoid excess sweat; clean incontinence (do not rub, pat);
- ♦ In people at risk (not moving; poor sensation) change position regularly (1-2 hours);
- ♦ Avoid pressure points in clothes or equipment.

If we care for people at risk for pressure wounds, we can do a lot to reduce the chance of problems by maintaining good health, cleanliness, and a pattern of regular movement to reduce prolonged pressure effects on skin.